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RHODODENDRON AUGUSTINII

Victor Lemoine and the Deutzias

HELEN M. FOX

Deutzias are charming shrubs, most of them low and rounded with arching branches and rising to three feet, a few taller, growing as high as ten feet. The flowers are either entirely white, tinted pink or sometimes more or less heavily marked with purple on the back of the petals and tinged with roseate purple inside as well. Most of them bloom in May or early June when the garden is predominantly white, pink or lavender with lilacs, azaleas, daphne, kolkwitzia, and all the flowering cherries and apples as well as dogwoods and cercis. When planted in front of the shrubbery, the rounded shapes serve to mask the stiff basal branches of lilacs and philadelphus, also the trunks of flowering crabs and soften the line down to the fresh green of spring lawns while their exceeding whiteness or pale pinkness brings brilliance to the color scheme, as is the way of white flowers. The late bloomers, *scabra* and its varieties, as well as *staminea* are handsome behind bush roses especially *Rosa rubrifolia* with its dark red foliage.

Some of the deutzias, as do some spiraeas and species roses, winter-kill at the tips of the branches and must be cut back to tidy them in spring. Now and then in a mild winter or one with a lot of snow, they come through unscathed and produce so generously of their snowy, luxuriant bloom they are worth the waiting.

There are said to be about fifty species of deutzia and all, except two which come from Mexico, have been found in China, Tibet, Japan or Korea. E. H. Wilson, in *More Aristocrats of the Garden*, wrote that during late May or June, in central and western China, they are a prominent feature of the

countryside, and that most of them grow in moist situations where there is good loam. They were named by Karl Peter Thunberg for Johann van der Deutz, a wealthy patron. In 1904 Maurice de Vilmorin listed twenty-seven deutzias in his garden, in 1925 Kew listed sixty-three while in 1943 the New York Botanical Garden listed fifty-four. Unfortunately no record has been kept of this last collection.

One of the charms of this genus is that all are easily raised from seeds, grow quickly and sometimes bloom in their second season. All can also be propagated by cuttings from half-ripened wood taken the end of June or later and placed in gentle bottom heat. The dwarf species and hybrids can be divided in half by inserting a spade down through the center of the plants.

Only four species of deutzia were known before 1887 so they are modern shrubs. Victor Lemoine, the great plantsman, was responsible for popularizing the species through the many stunning hybrids he made of them in his garden at Nancy in Lorraine.

Victor Lemoine was born in 1830 at Delme not far from Nancy where he died in 1911 in time to escape a second invasion of his country by the Germans. His family had been gardeners for generations and undoubtedly he imbibed much garden lore as a child. His training was typical of his period and his country, a thorough schooling based on the principles of preparation as for membership in the medieval guilds. He studied at the college of Vic sur Seille and then went on his journeyman days, working in the establishments of the principal horticulturists of France and Belgium such as

Van Houtte in Ghent, Meilleux at Lille and Bauman at Bolwiller. He came to Nancy when he was over twenty and settled there where he produced some of the most beautiful perennials, annuals, shrubs and greenhouse plants of our time, for a large proportion of flowers in present-day gardens originated through the magical "amelioration," as he called it, of Victor Lemoine. He owned a substantial home with greenhouses and gardens adjoining. His picture shows him to have been highly intelligent, forceful, determined and with the uncomplicated and direct look that so often characterizes a man who works in the soil.

His character is shown by the immense amount of work he accomplished, putting out some new plants from 1852 nearly every year until almost the year of his death. This meant selecting the "best" from hundreds of seedlings. It was said of him that every plant he introduced was handsome, well-shaped, and of excellent color. Moreover he worked for hardiness as well as looks.

Lemoine was a devoted family man and named many plants after his wife and after his daughter-in-law, Madame Émile Lemoine. His son Émile worked by his side and was given part credit for new introductions which were always mentioned as coming from Lemoine et Fils. Lemoine was also intensely patriotic and named many plants *La France* and *La Lorraine*, and in proof of his local pride he used *La Belle Nancienne* frequently. As is true of all Frenchmen, "Gloire" meant a great deal to him and again and again the names of *Gloire de Nancy* and *Gloire de Lorraine* appear. To him his tall stately lilacs must have seemed like people and their names are like a *Who's Who* in the France of his day. They bear the names of scientists, in-

ventors, authors, one novel—*Pêcheur d'Islande*, plant explorers, poets, painters, philosophers and statesmen, including presidents of France. One was named for the landscape architect Eduard André and another for Mattieu de Dombasle, a famous agriculturist who was a neighbor at Nancy. One was named after the grand chancellor Foulherbe of the Legion D'Honneur, of which Lemoine was made an officer. The names show him to have been well read, well informed, a "republicain" and not in any sense royalist or Bonapartist. He also named many of his hybrids with accurate descriptions of their looks and poetically as well.

Moreover Lemoine was a member of the town council of Nancy from 1871-1888. He was active in the horticultural societies of his day, wrote frequently for their journals and exhibited at the shows. He was an officer of the Société d'Horticulture de Nancy and after the first show had been held was awarded a medal for his services. However he refused to accept it, stating all he wanted was the accomplishment of his duties and with typical French frugality told the committee to keep the medal and award it to someone else, another time. At his death he was an honorary member of the Royal Society of Agriculture and Botany of Belgium, of the Royal Bavarian Society of Horticulture in Munich and a corresponding member of the Massachusetts Horticultural Society in Boston. He was the first foreigner to receive the Veitch medal from the Royal Horticultural Society in England and shortly before his death received the George White medal from the Massachusetts Society.

Lemoine lived in the golden era of French horticulture. The Abbés David, Delavay, Farges, Soulié and other French missionary explorers were



Robert L. Taylor

Deutzia longifolia Veitchi

sending home seeds and plants from China, then newly opened to foreigners. The French government was aware of the importance of these discoveries and helped to finance some of the priests. Specimens were sent to the Musée d'Histoire Naturelle in Paris (a botanical garden) where men like André Franchet, identified them and D. Bois and P. E. Duchartre wrote about them. Skilled gardeners employed by the Museum notably Elie Abel Carrière (for whose wife Lemoine named a lilac) grew the seeds. Moreover the two Vilmorins, Philip and the bishop Maurice had notable gardens in which newly discovered plants were grown. Catalogues of the contents of their gardens were published of one in 1904 and the other 1906 which contained over six thousand plants. Lemoine was in touch with all that happened in the plant world and received any plants and cuttings he might desire. He corresponded with scientists at Kew and with Dr. Sargent in Boston.

Among the hundreds of plants produced by Lemoine were the double portulaca; hybrids of Gladioli, streptocarpus, montheletias, pelargoniums, ceanothus, dahlias, primulas, salvias, abutilon, pyrethrum, hydrangea, bouvardia, *Asparagus soeberanus* and exochorda. He was the author of many plants grown today; among the peonies, to mention only a few, are Solange, Le Cygne, Tourangelle and Mme. Émile Lemoine. He also worked with large-flowered clematis, with weigelas, delphiniums and philadelphus while his work on lilacs is particularly famous. His first hybrid lilac in 1878 was \times hyacinthiflora and a few of the superlatively handsome ones are Mme. Lemoine, Ellen Willmott, Waldeck Rousseau, Congo, Réaumur, Charles Sargent and Pasteur. His Begonia, Gloire de Lorraine produced in 1893

made a fortune for its American introducer and he was the man who in 1893 created fuchsia Solferino. From the Japanese anemones he got Vase d'Argent, Mont Rose, and Turban and among hybrid phloxes now in our gardens are Éclaireur, Flambeau, Etna, Coquelicot, La France, La Lorraine, Mathilde Sero, Maximilien and Madame Émile Lemoine.

Since this is to be the story of Lemoine and his deutzias, his other work, important as it is, will have to be omitted reluctantly. In 1875 in the Revue Horticole, Lemoine gave a list of the deutzias he considered most attractive. Many of the names are now synonyms, but among them are *scabra*, *scabra flore pleno*, *discolor* var. *purpurascens*, *brunoniana*, *parviflora*, *corymbosa*, *grandiflora* and *gracilis* (which he said was widely grown for forcing between Christmas and Easter).

It has been a subject of discussion by plantsmen as to why Lemoine used only ten species for his hybrids when so many others were available. Judging from the superb results, he knew they were best suited to his purpose, moreover each of those he chose had distinctive qualities. He crossed his plants both ways and often used the hybrids as parents with species and with each other. It is difficult to tell which was the pollen parent in a cross for sometimes as in the parents of \times *Lemoinei* they are given as *parviflora* \times *gracilis* and again as *gracilis* \times *parviflora*; or with \times *myriantha*, the parents are either *parviflora* \times *setchuensis* or *setchuensis* \times *parviflora*.

The ten deutzia species Lemoine used are the following:

D. discolor Hemsl.

D. gracilis Sieb. and Zucc.

D. longifolia Franch.

D. mollis Duthie (Lemoine may not have used this)

D. parviflora Bge.



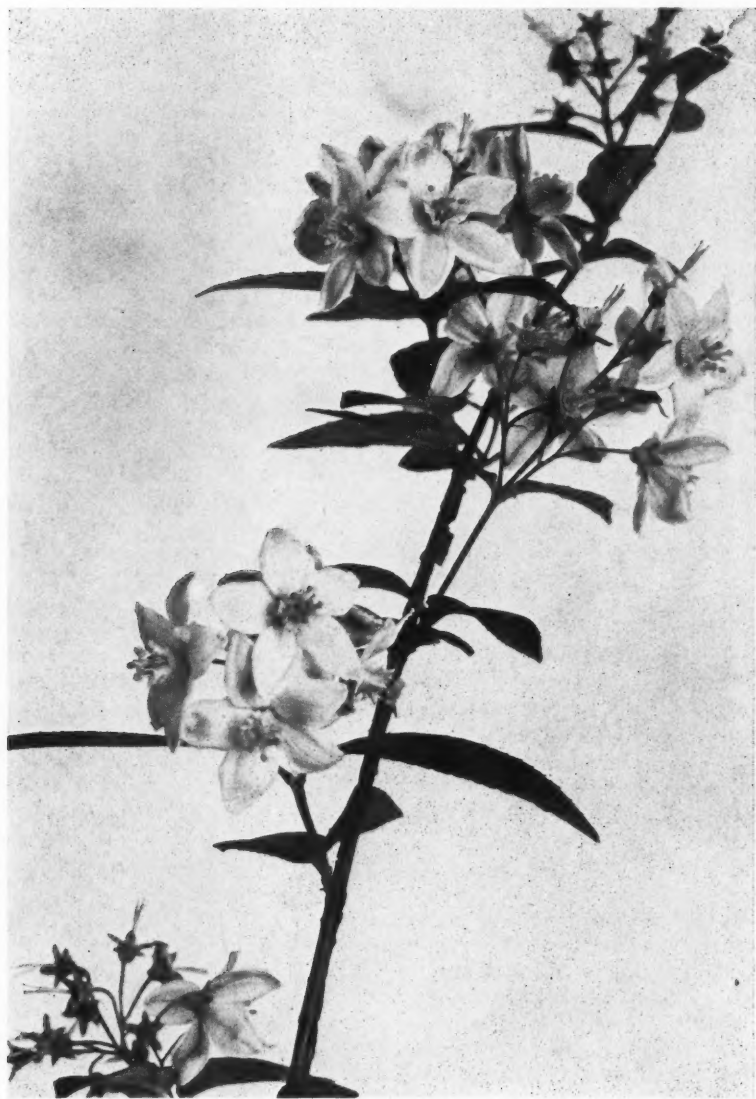
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Deutzia × hybrida, Mont Rose



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Deutzia × *hybrida*, *Magicien*



Robert L. Taylor

Deutzia × *hybrida*, *Perle Rose*

D. purpurascens Rehd.
D. scabra Thunb.
D. setchuensis Franch.
 and its variety *corymbiflora* Rehd.
D. Sieboldiana Maxim.
D. Vilmorinae Lemoine

Dr. Rehder changed many of the names of Lemoine's plants to conform with better taxonomic practice.

The characters belonging to all members of the genus *Deutzia* are as follows: Branches upright or arching, covered with peeling untidy looking bark; the height generally 3 to 6 feet and a few up to 10 or 12 feet. They have ten stamens with winged filaments, often toothed or forked at the top; five petals and five calyx lobes; starry hairs or scurf covers most of the plant and makes them rough to the touch; leaves opposite; flowers white or tinted rose-purple, some hybrids pink; either in racemes as in *gracilis* and *scabra* or in corymbose panicles.

The deutzias used by Lemoine and the hybrids he made from them, as also a few other hybrids follow:

Deutzia gracilis Sieb. and Zucc.

This plant grows to 3-6 feet high with slender arching branches and white flowers in upright racemes. It was introduced to cultivation from Japan about 1840 but is known to grow also in central China and Korea. In England and France it is considered hardy, but in the United States it is placed in Zone VI.

From *D. gracilis* × *Sieboldiana* we get × *Deutzia candelabrum* (Lemoine) Rehd. and the forms now recognized by Rehder as *D. candelabrum fastuosa* and *D. candelabrum erectum*, which differ from each other in minor details.

From *gracilis* × *purpurascens* we get × *Deutzia rosea* (Lemoine) Rehd. and the forms now recognized by Rehder in his Manual of Culti-

vated Trees and Shrubs as, *D. rosea multiflora*, *D. rosea carminea* and *D. rosea eximia* with white flowers soft rose on the outside of petals coming from buds that are rich carmine; *D. rosea venusta* with large white flowers, petals frilled on edges; *D. rosea floribunda*, flowers pink-tinted; *D. rosea campanulata* with large open bell-shaped flowers.

Deutzia discolor Hemsley

Common in central and western China, this species was sent to France by the Abbé Delavay in 1888 and was exhibited and widely grown in gardens. It has arching branches, grows to 6 feet; long thin leaves and broad clusters of white, occasionally pink-tinted blossoms. W. J. Bean in Trees and Shrubs Hardy in the British Isles says that the best form is the var. *major* which has white or faintly rose-tinted flowers 1 inch across, produced on long arching sprays. This variety, as well as the plants once referred to it as varieties, *elegantissima* and *fasciculata* are mentioned in the Kew Lists for 1925. These last two forms are now referred by Rehder to a separate entity, × *D. elegantissima* (Lemoine) Rehd. and *D. elegantissima fasciculata* (Lemoine) Rehd. since Rehder had evidence that they were not forms of *D. discolor* but hybrids between *purpurascens* and *Sieboldiana*. I raised either the type or the variety *major* from seed in Peekskill, where the plants usually flowered about June 10 although the bushes were often seriously injured by the winters. With me the flowers were a lavender-pink with margins whiter than the rest.

Deutzia longifolia Franchet

This was discovered by the Abbé David in China and along the Tibetan border. By some it is considered



Robert L. Taylor

Deutzia × *hybrida*, *Joconde*

the handsomest plant of the genus, but it is not too cold resistant and is assigned by Rehder to Zone VI. It grows 5 to 6 feet high, with ascending branches covered with narrow leaves and thickly covered in season with flattened 3 inch broad flower clusters. The flowers are an inch across and range from bright rosy pink to crimson pink.

Several forms are recognized of which *Veitchi* shows the best color and is considered by some the best of all *deutzias*; *elegans* carries rosy purple flowers in loose clusters and *Farreri* is white.

From *longifolia* crossed with *discolor* we have the group of plants now classified as $\times D. hybrida$ Lemoine. Here belong the garden clones known as Magicien, Mont Rose and Contraste as recognized by Rehder, but Lemoine himself offered in trade about 1914 Perle Rose and Joconde that obviously belong here as well. These all tend to rather erect growth, and show large flowers with heavy pinkish lavender tinting on the reverse of the petals that shows through and gives a pink tone to the face of the flowers. They seem to be not much more cold resistant than their parent.

Deutzia mollis Duthie

This seems to be one of the less showy species. It was introduced from China in 1901 and to the taxonomists seems interesting chiefly from the soft pubescence on the under surface of the rather broad leaves. It is hardy to Zone VI. For Lemoine it was useful in producing $\times Deutzia$ *Wilsoni* Duthie for which it is reported to be the pollen parent, the seed parent being *D. discolor*, from which it does not appear to differ greatly.

Deutzia parviflora Bge.

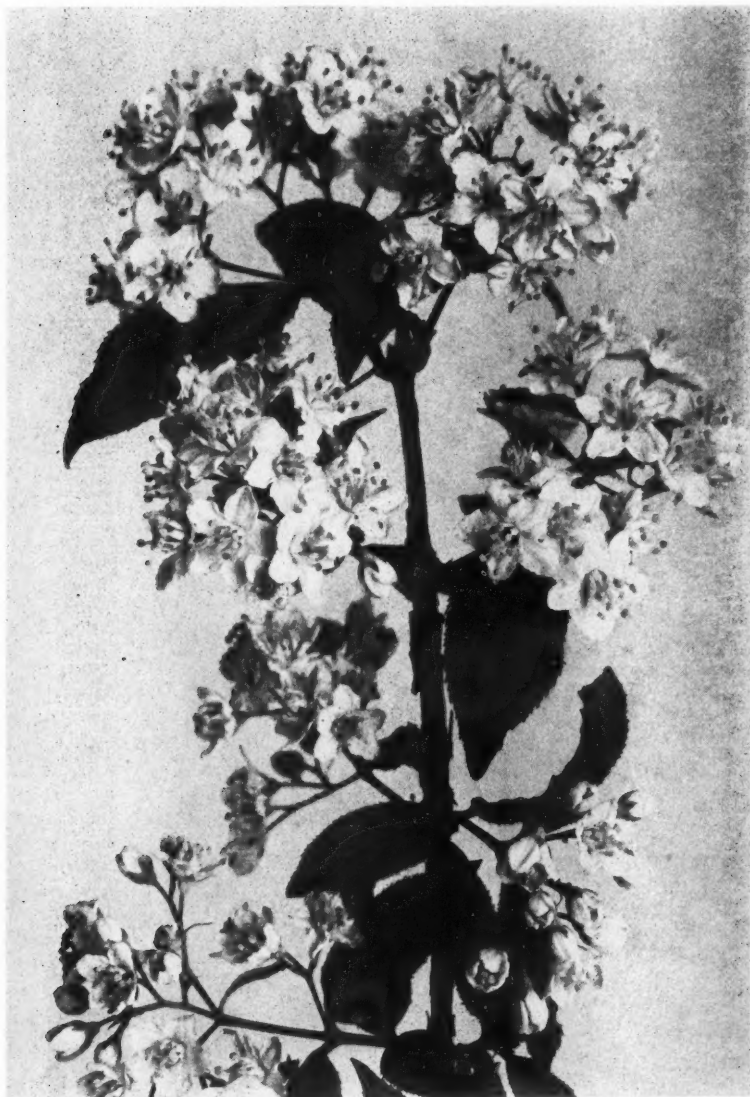
Native to northern China this is one of the hardiest species growing well in Zone IV. Lemoine mentions that he had twigs of it from Dr. Sargent from which he made cuttings, thus establishing the introduction in France as of 1890. Dr. Emile Breitschneider, author of History of Botanical Discoveries in China had sent seed to the Arnold Arboretum. It has small pure white flowers that appear creamy in tone because of the yellow anthers. They appear in flat clusters. It grew in my Peekskill garden where it usually flowered about May 23. It has a faint but delightful scent.

The cross of *parviflora* \times *gracilis* produced the plant that is now known as $\times Deutzia$ *Lemoinei* Lemoine. Bean says of \times *Lemoinei* that it grows 7 to 8 feet high, with pure white flowers $\frac{5}{8}$ " across in erect corymbs and more beautiful than those of *gracilis*. In my garden it bloomed near the end of May, with creamy white flowers above the rather yellow green foliage. The stems are brittle and it did not seem one of the best to me. Its form *compacta*, in my garden was more dwarf and more compact, with larger flowers in numerous panicles.

From the hybrid *Lemoinei* crossed with *Sieboldiana* we now have the plant that Rehder lists as $\times D.$ *candida* (Lemoine) Rehder. My notes show only that the flowers are large, starry, open, in close panicles; that the plant is handsome, graceful and makes a low shrub.

Deutzia purpurascens Rehd. was known to Lemoine as *D. discolor purpurascens*.

It grows 7 feet high and is native to Yunnan in China where it was discovered by the Abbé Delavay who



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Deutzia × *Wilsoni*



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Deutzia scabra purpurea



Robert L. Taylor

Deutzia scabra formosa

sent it to Vilmorin in 1888, who in turn gave it to Lemoine. It is allied to *discolor* but distinguished from it by scales on the leaves, wings on the filaments extended beyond the anthers, details for the taxonomist to note rather than the gardener. It is a very handsome shrub but not reliably hardy north of Zone VI. The flowers are starry, white suffused with rosy purple on the reverse of the petals. After *D. scabra* this was the second colored deutzia to reach Lemoine who immediately used it in hybridizing.

From *Lemoinei* \times *purpurascens* we have the plant now known as \times *Deutzia maliflora* Rehd., although another author gives the reciprocal cross as the origin. Its flowers are purplish in the exteriors, as is the rather long calyx. It is Dr. Rehd.'s belief that the garden plants known as Fleur de Pommier, Boule Rose and Avalanche all fall within the botanical limits of this cross, though the last is credited in another paper to *parviflora* \times *gracilis*.

From *purpurascens* \times *gracilis* we have the plant now known as \times *Deutzia rosea* (Lemoine) Rehd. which some hold to be handsomer than the plants that came from the cross, *Sieboldiana* \times *purpurascens* here discussed under *Sieboldiana*.

E. H. Wilson in writing of this species said "all hybrids of *purpurascens* are remarkable for their abundant star-like blossoms which are pleasing in the opening bud and expanded flower."

Deutzia scabra Thunb.

This is the best known and most popular deutzia in the United States having been grown here since 1822. It is native to Japan and China. It is the tallest of the deutzias growing to 10 feet, the most vigorous and

hardy to Zone V. It is the last to flower, coming in late June and early July. The upright canes eventually over arching somewhat have the typical exfoliating bark that is characteristic of the genus. The pure white flowers are often stained with dull pink or purple on the reverse but the petals themselves are stiff and erect. In the past the name *D. crenata* was also used for this plant. There are many garden forms of which the var. *plena* shows the fine white flowers stained with purple on the outer reverse of petals. Pride of Rochester is the garden name of this form. *Candidissima* is probably as spectacular as any with splendid double white flowers.

The cross between *scabra* and \times *Vilmorinae* produced the plant now known as \times *D. magnifica* (Lemoine) Rehd. which interests the botanists by its inflorescence shorter and broader than that of *scabra* and the ascending teeth on the filaments. It was interesting to Lemoine himself in that it was the first time *scabra* had been fertile to 'strange pollen.'

There are many garden variants to \times *magnifica*, *latifolia* with flowers nearly an inch and a half across, creamy white in color, the calyx gray marked with russet and the stems and petioles touched with pale wine red. It was hardy in Peekskill and its nodding campanulate flowers in their tassel-like panicles made a stunning show in early June. *Formosa* has spreading petals of faint creamy hue. It bloomed freely with me in Peekskill about June 9 and its fluffy blooms covered the plants handsomely. Other forms in trade are *erecta* and *eburnea*.

Deutzia Sieboldiana Maxim.

This species was introduced into Chenault's Nursery at Orleans.



Robert L. Taylor

Deutzia × magnifica suspensa



Robert L. Taylor

Deutzia Sieboldiana var. *Dippeliana*



Robert L. Taylor

Deutzia × *elegantissima*

France about 1890. It is native to Japan, grows to about 6 feet at the most and is distinguished by the deeply rugose leaves and the starry flowers borne on upright panicles. Hardy in Zone V. It has a charming variety *D. Sieboldiana Dippeliana* Schneid. introduced to cultivation in 1875, that is equally hardy.

From *Sieboldiana* crossed with *purpurascens* we now have the plant known as \times *Deutzia elegantissima* (Lemoine) Rehd. a group of garden plants in which Lemoine propagated not only the plant recognized under the name above, but the varieties *fasciculata* and *arcuata* of which the last differs chiefly in the white flowers with no tint of rose color.

The plant now known as \times *Deutzia carnea* (Lemoine) Rehd. came from *rosea grandiflora* (itself a hybrid) crossed with *Sieboldiana*. This again is a group designation as Lemoine not only chose the plant that bears the name *carnea* but color variants that are now called *stellata*, *densiflora*, and *lactea*, terms that describe them well enough.

Deutzia setchuenensis Franchet

This species from central and western China seems less showy than many. It grows to 6 feet, with the usual erect canes that shed their brown bark slowly, coarse leaves and white flowers in 'loose few-flowered corymbs.' It was introduced in 1893. Hardy to Zone VI.

The var. *corymbiflora* Rehd. was found by the Abbé Farges and introduced into France by Vilmorin and offered to the trade by Lemoine in 1897. The leaves are larger and broader than in the type. Lemoine himself believed it distinct and wrote in 1898 that it was a distinct species and close to *staminea*, *Fargesii* and *setchuenensis*.

The cross *setchuenensis corymbiflora* \times *parviflora* produced the plant now known as \times *Deutzia myriantha* Lemoine. This is a beautiful hybrid produced in 1904, with numerous flowers in large corymbs and harder to cold than *setchuenensis*. Generally the parent is given as *setchuenensis* but I found the record as above.

Deutzia Vilmorinae Lemoine

This species from central and western China was sent to Maurice de Vilmorin by the Abbé Farges in 1897 and after *scabra* promised to be the most favorable to breeding. It is a rapid grower and soon makes 10 feet. The flowers are in loose slender corymbs, white and produced late enough to escape spring frosts. It is related to *D. discolor*. Hardy in Zone V.

From *Vilmorinae* crossed with *rosea grandiflora* (itself a hybrid) we have the plant now known as \times *Deutzia excellens* (Lemoine) Rehd.

Since the possibilities of hybridizing in the genus *Deutzia* are by no means exhausted it would be a splendid thing if some modern worker would begin the task left off by Lemoine and produce still other hybrids that would be harder to cold, have more tidy plant habits and show a greater and clearer range of pink colorings in the flowers. There are now other species* with which to work and it is not impossible to believe that we might in time have groups of plants that would be particularly suited to different regional requirements.

Mt. Kisco, N. Y.

*In order to bring them to our reader's attention we are including here, figures of two species not used by Lemoine, that might be of value to breeders though the species from Taiwan would not be likely to add much to the cold-resistance of the progenies. (See page 124.) Ed.

(Continued on page 126)

The Tree Crapemyrtles

EDWIN A. MENNINGER

The common bush Crapemyrtle (*Lagerstroemia indica*) of southern gardens from Texas to North Carolina has many handsome tree relatives that are beginning to find a place as outstanding ornamentals in the warmer parts of Florida.

Of the perhaps 20 species of *Lagerstroemia*, 12 or more are Indian, 3 Malayan, and at least one Chinese—the common bush crapemyrtle of the South which despite its scientific name, *L. indica*, did not come from India. There are representatives of the genus also in Australia, Indo-China, New Guinea and Madagascar. The various species have many things in common: nearly all of them have showy mauve to pink flowers with wrinkled petals that would justify spelling the common name CREPE myrtle; their woody capsular fruits, seated on persistent woody calyces, contain many winged, usually small light seeds which are uncertain in their germinative power, a large proportion being as a rule infertile; their leaves have big pointed buds in the axils (a feature distinguishing the genus from *Eugenia* which it much resembles in habit); in many species the leaves wither red, which serves as an identifying note; the bark of most species flakes off in patches, rather like the Planetree (*Platanus*).

Commonest of the tree species in cultivation in Florida is the Queen's Crapemyrtle (*Lagerstroemia speciosa*, syn. *L. flos-regina*) which Macmillan calls "undoubtedly one of the most strikingly showy of flowering trees." Reaching maximum size in the damp jungles of Assam and Burma, Ceylon and Travancore, where annual rainfall is 180 inches or more, the

Jarul, as the Hindus call it, becomes an 80-foot handsome timber tree, second in value only to the teak (*Tectona grandis*). It is found typically along river banks, but it is not confined to such places, and is plentiful, though in comparatively smaller size, in many parts of India where rainfall is as low as 50-60 inches. In this same rainfall bracket much of South Florida falls, and the Queen's Crapemyrtle makes itself very much at home. Shade the plant abhors, so that in the forest it grows fast and straight, reaching for the light. In the full sun of a Florida garden however it becomes a sprawling shrub of gigantic dimensions (sometimes 30 feet across), unless forced by staking to assume the responsibilities of a tree; as such it will reach 40 feet in 10 years. Because in its natural habitat the maximum shade temperature is 95-110°F., and the absolute minimum is 36-65°F., the Queen's Crapemyrtle is not found north of the Tampa-Daytona Beach frost line, though like some other plants it may adapt itself gradually to less protected areas, and become hardier when dormant. Ordinarily in South Florida it holds its leaves pretty well until February, coloring them bright red, and dropping them slowly in December and January. Once bare, it stays that way four to six weeks. However the blizzard of November 25th, 1950 that buried Ohio and Pennsylvania with record snowfall and extended its icy fingers into Florida, produced temperatures as low as 31°F. as far south as Miami. The *Lagerstroemia* trees in the author's yard at Stuart, Florida, were subjected to a 32° temperature for three hours on the morning of November 26th, but high



McClellan

Lagerstroemia speciosa, flowers mauve to royal purple. This 15-foot tree in full bloom, July 15, 1950 at the F. L. Paddock residence in West Palm Beach, Fla.



H. F. Loomis

The pink form of Lagerstroemia speciosa, taken to show characteristic position of flower spikes at top of tree, growing in nursery of G. R. Wilson, South Miami, Fla. May 19, 1950

winds prevented frost. Every leaf on *L. speciosa* curled up and dropped with the cold, and this year the tree will be bare several months.

The flowering period of *L. speciosa* extends over several weeks. It sometimes begins as early as May and occasionally lasts as late as August. Small plants in the sun may bloom when only 18 inches high. The inflorescence is an upstanding spike, far above the leaves, 3 to 4 inches in diameter, usually 8-12 inches, sometimes 18 inches long. The spike is massed with 3 inch flowers at its base where it begins to flower first and carries quantities of pink and green buds toward its tip. When first opening the rose-like scentless blossoms with 6 or 7 petals, are a rich, deep mauve, almost purple. They open full before sunup. On the first morning they have a fresh fluffy appearance from the projecting stamens. On the second they look weary, the stamens having coiled up in the night into a brownish mass in the center of the flowers, and during the day the petals fade to pale pink or white. Most of the flowers fall off by the third day, but the inflorescences are ample and flowering goes on for weeks. The color of the flowers varies with different trees; some being purple and others being different shades of mauve approaching pink. Occasionally a bright pink or a magenta is seen, and these are particularly beautiful, but the colors do not come true from seed. This and other species of *Lagerstroemia* can be grown from cuttings, but all of the plants seen in Florida are seedlings. Some trees bear quantities of seed, the pecan-size, green seed pods turning brown and persisting on the tree often into the next flowering season.

Florida growers get rich pleasure from the summer beauty of *L. speciosa*, but because it is bare for such a long

period at the height of the winter tourist season, growers have looked favorably toward the introduction of other species which hold their foliage better, and one or two of which offer longer blossoming periods, reaching even into the winter tourist season.

One of these of great promise is the Malayan *L. floribunda*, shrubby in its Florida growth, although in Malaya it is a 60-foot, dense, bushy cone, its branches hidden by the foliage. This lovely tree was introduced here from India in 1934. For another picture and description, see National Horticultural Magazine, Oct. 1949, pp. 161-3. *L. floribunda* is one of several species of this genus that are inclined to flower a second time in some years. The tree pictured in this article bloomed in June 1950, and it had a second flowering period the first week in November when it was as handsome as it was in early summer.

To the Harvard Botanical Garden in Soledad (Cienfuegos) Cuba goes credit for the introduction of two new evergreen species, *L. thorelli* and *L. turbinata*. There is a similarity between these two that suggests they may prove to be identical. Another species of doubtful validity, *L. thouarsi*, has been established in Florida from seed received by the author from India; this probably is identical with *L. thorelli*. Benthall in his "Trees of Calcutta" says *L. thorelli* is native of Cochin China and continues: "A medium-sized tree . . . flowers about 1¼ inch diameter, in copious axillary panicles; . . . This is a tree of moderate size with a short trunk . . . and pale yellowish-grey bark. . . . The flowers—in large, open clusters from near the bases of the leaves . . . are purple or lilac-coloured when they first open, but soon fade to an almost pure white. . . . This tree is not unlike *L. speciosa* . . . but has much



Nixon Smiley, Miami Herald

Lagerstroemia floribunda. Detail of flower spikes of the Malayan species. Foliage is glossier, individual blossoms are smaller and more numerous than in other species.

smaller leaves and flowers; moreover, its flowers are less brilliant in colour even when they first open. . . . However, the tree does not compete with its more splendid relative because its flowers open after the break of the rains, when the *Jarul* flowers are over. . . . giving a fine display of bloom throughout the monsoon months. . . . This tree—is now common in gardens and is occasionally planted in streets as an avenue tree. . . . The leaves fall during the cold season and are replaced in February and March, the new foliage often being reddish in colour."

Ida Colthurst's "Familiar Flowering Trees in India" says of *L. thorelli*: "Being very popular for its beauty and long season of bloom, it is *le dernier cri* in tree planting." Lancaster: "An Amateur in an Indian Garden" suggests that *L. thorelli* "which blooms later (than *L. speciosa*) will last from May to October and if spikes are removed as the flowers fall a second flush will result. This is an ideal amateur's tree."

L. turbinata blooms in Florida from August to November. Its much branched flower spikes above the foliage may be as much as 20 inches high and up to 10 inches wide at the base, carrying hundreds of blossoms. New flowers open bright mauve each morning, coloring gradually pink toward evening; next day they turn creamy-white and the third day brown before they fall off. In normal weather the flowering goes on for weeks. The tree grows tall, straight and slender; it is practically evergreen.

Among recent re-introductions is a doubtful species, *L. hirsuta*, which the United States Department of Agriculture brought in 30 years ago as P.I. 52512 with this memo: "A small tree with exceedingly ornamental flowers which are very large and purplish pink.

It is found in the dry jungle of Korat." The tree is allied to *L. speciosa*. Although the U.S.D.A. had no record of the survival of any of these original trees, there is on the Van Dyck place in St. Petersburg, Fla., a large tree which seems to belong to this species and efforts are being made to identify it definitely. There is also a mature tree from the original introduction growing on the grounds of the Gorgas Hospital at Ancon, Canal Zone. From it a considerable number of trees have been propagated by the Canal Zone Experimental Gardens at Summit, C.Z., and distributed by them. Walter R. Lindsay, director, says of the specimen at Ancon: "The tree is approximately 75 feet tall with a spread of only 20 feet, although it is branched to within 10 feet of the ground. The base of the tree is 15 inches in diameter. The slender branches, one and a half to two inches in diameter, are drooping and show evidence of having flowered uniformly and profusely. The leaves are velvety and approximately three inches wide by seven inches long. The seed pods when dry are about three-eighths of an inch in diameter."

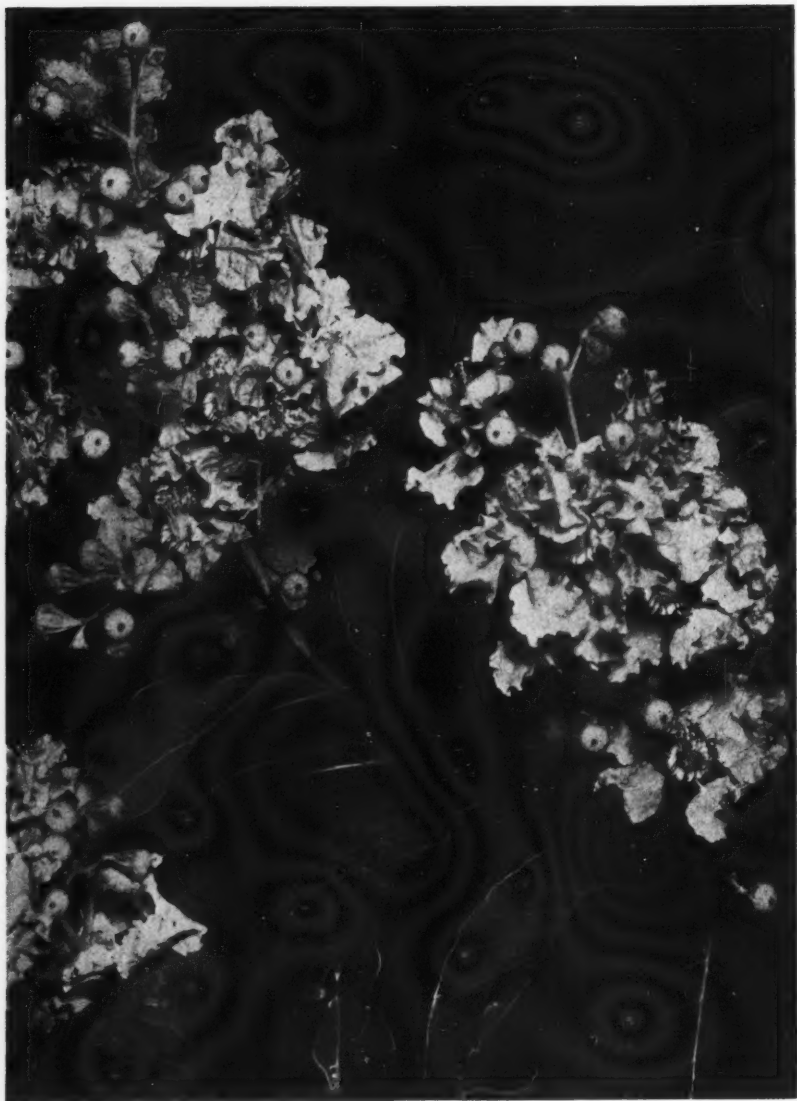
Through Mr. Lindsay the author obtained seed of *L. hirsuta*, propagated many trees and distributed them all over Florida.

It is noteworthy that the three hour exposure to a 32° temperature on November 26th, which stripped *L. speciosa* of its leaves, apparently failed to injure the foliage on five other species of tree Crape-myrtle in the same location. These were *L. thorelli*, *L. turbinata*, *L. thouarsi*, *L. hirsuta* and *L. floribunda*. All of these would seem to be hardier than the Queen's Crape-myrtle; yet no definite conclusion can be reached because all of the *Lagerstroemia* trees change their leaves at least once a year, and sometimes often-



McClellan

Lagerstroemia turbinata, specimen at West Palm Beach home of David Sturrock, photographed August 15, 1950. This plant in full sun has tendency to sprawl, though it is more slender and erect when grown in partial shade.



Coulant

Lagerstroemia turbinata. Details of flower and foliage on field specimen at residence of Edwin A. Menninger, Stuart, Florida.

er. This leaf change is quick, so that the old foliage will be dropped in the course of a few days, and the new leaf growth will come on within a week. In effect many of the trees are evergreen.

The author has succeeded in establishing small trees of several other Crapemyrtles, notably *L. tomentosa*, which has handsome white flowers twice a year in great quantities. A particularly good lot of seed in the summer of 1950 produced a large crop of seedlings. Five previous plantings over 10 years failed to result in a single germination.

In West Palm Beach, Fla. on Parker Avenue near Okeechobee Road, is a specimen of *L. loudoni* which blooms infrequently. The flower spikes are 18-24 inches long and less than 3 inches diameter, individual blossoms are 1½-2 inches across, the coloring much like other species. Repeated efforts over many years have produced only one seedling from this tree, though seed is readily obtained.

There are several other tree crape-myrtles that would seem to be highly desirable as ornamentals which have not yet been established in the United States. Seed of them is obtained infrequently but its fertility is all gone by the time it gets here. Particularly desirable is *L. macrocarpa*, which is like *L. speciosa* except it has larger flowers and leaves.

Corner's "Wayside Trees of Malaya" suggests that the 100-foot Malayan forest tree *L. ovalifolia*, lacks the drooping tendency of *L. speciosa* and as it has the same beautiful flowers, "may make a better tree if it can be brought into cultivation."

Only one other species, *L. parviflora* grows in this country, having been established at the U. S. Plant Introduction Garden at Coconut Grove many years ago. Its flowers are small and inconspicuous, and the tree is not promising as an ornamental.

Stuart, Fla.

Rhododendron Augustinii (frontispiece)

The lovely colored plate that we use as a frontispiece in this issue we owe to the generous assistance of Walter C. Slocock, Ltd. of Woking, England. It is a species that has come in for endless comment ever since it was introduced into cultivation in 1899. There is ample record to show that seedlings raised from the original seed and other lots have shown great variation in the hues of the flowers, and that discriminating gardeners have always chosen the 'bluest' individuals from the lot to grow on, with cutting propagations as the best means to that end.

In the editor's garden, no seedling

out of many has survived the winters, although a few have lasted more than one winter, once they were large enough to be expected to survive. Not one of the few had a chance to send up even one sample flower.

The Pacific Northwest has no such problems and it is to be hoped that some gardeners there will not only import the best color forms known but will also start raising seedlings and selecting for the American scene.

Like most of the members of its group and their allies, there is a jaunty carriage in the plants and their flowers that endears them to those gardeners who have come to the whole genus via the azaleas.

Dischidia Rafflesiana

HENRY TEUSCHER*

The appellation "one of the most curious plants of the world" which is so often misused, certainly fits the object of this note. Because of its strange living and growing habits *Dischidia Rafflesiana* never fails to attract attention in any public exhibit but, unfortunately, it is very rare in plant collections. The Montreal Botanical Garden, therefore, was greatly pleased when about a year ago it managed to obtain, in exchange for other plant material, the specimen shown in the accompanying picture from the Royal Botanic Gardens of Indonesia at Buitenzorg, Java. As can be seen, it has been attached to the concave side of a large piece of cork bark which latter was filled with a mixture of rotted wood and *Osmunda* fiber. On this rather inhospitable medium the plant has thrived exceedingly well and now appears to be ready to produce flowers. As far as is known to the writer nobody yet has ever managed to get this plant to flower in cultivation.

The most peculiar and most intriguing characteristics of this plant are its pouchlike leaves (ascidia-bags) which are hollow inside and have an opening near the stem. Moisture collects in these pouches as well as organic matter, small insects for instance crawl into them and perish there, and roots descend into the pouches from the stem. It was formerly believed that the pouches represented insect traps, somewhat on the order of the pitchers of our pitcher plants, but this is undoubtedly not the case. The pouches apparently serve merely as receptacles as is attested by the roots which grow into them. In its native jungle habitat the

plant is exposed to very wet as well as to comparatively dry seasons, and the moisture reserve in the pouches probably serves to tide it over. Without having any connections with the ground, *Dischidia Rafflesiana* crawls up on the trunks of trees (frequently on dead trees) where only such nutrients are available as run down with the rainwater. It may, therefore, be said to carry its lunch along in its pouches as it goes traveling. It is this strange and almost unique habit which renders this plant so interesting. Only one other much rarer species of the same genus, *D. complex*, which apparently has never been introduced into cultivation at all, is known to produce this type of pouches. Another remarkable feature is that the pouches are green and actually do function also as leaves.

As can be seen in the photograph, true leaves, which are round, flat and fleshy, are formed on separate shoots which are the real growing parts of the plant. Though the writer has never seen this plant in its native habitat—India, Malaya, Borneo and Australia—he is inclined to presume that the shoots develop during the rainy period, while the pouches are formed at the beginning of the dry season. Flowering probably also occurs at the beginning of the dry season. Our plant, which so far has been syringed with rain water twice a day, is now, since it has developed flowering spurs, being kept much drier. We hope to induce it, not only to flower but also to form pouches.

The true leaves, by the way, as well as the manner in which the flowering spurs are formed, show rather clearly the close relationship of *Dischidia* with

*Curator, Montreal Botanical Garden.



Dischidia rafflesiana

the genus *Hoya* (to which the well-known wax plant, *H. carnosa*, belongs). The flowers on the other hand are the main distinguishing feature between the two genera, being urn-shaped (urceolate) in *Dischidia*, while they are flat and wheel-shaped (rotate) in *Hoya*. The *Dischidias* of which some 24 species have been described—the most commonly cultivated one being *D. benghalensis*—are true epiphytes, always living attached to the trunks or branches of trees without being parasitic on their hosts. They belong to the large family of Asclepiadaceae which, to mention only a few, includes among

others the succulent Stapelias, Carallumas, and Huernias, certain little known leafless desert shrubs, the frequently tuberous Ceropegias, the climbers Periploca, Stephanotis (Madagascar Jasmine) and Cryptostegia (the rubber vine) as well as the herbaceous Asclepias (Milkweeds), Cynanchum and Vincetoxicum. An exceptionally wide range of distinct plant forms, showing an amazing ability of adaptation to different living conditions. The various ways and means developed by members of this family to overcome severe drought are particularly noteworthy.

Rhododendron Notes

CLEMENT G. BOWERS, *Editor*

Rhododendron atlanticum, *A Stoloniferous Azalea*

In our enthusiasm over the flowering of azaleas, we sometimes pass over other characteristics that are peculiar to the group which might be advantageous to know about. For example, *Rhododendron atlanticum*, in the *Pentanthera* subseries, is the only species that has an extensive, ramifying root system. Where this azalea grows, chiefly in the coastal plain of the Carolinas, the low damp woods are covered by solid colonies that are reported to cover as much as an acre. Some plantings spread all over a meadow bank rather loosely while others grow in rather compact clumps but all appear to have the stoloniferous habit.

Last year, I dug out a section of a planting and washed the roots free of soil. As the accompanying plate shows, the root system is comprised of a number of rangy, horizontally-spreading members that eventually turn up as

vegetative shoots. These, when snipped away from the main clump, are an easy means of propagating this azalea. It will, however, propagate from cuttings which is not the rule for deciduous azaleas.

Mr. Joseph Gable of Stewartstown, Pa., mentioned that this stoloniferous habit can be observed in *R. pennsylvanicum*, which is the natural cross of *R. atlanticum* and *R. nudiflorum*.

The flowers, although incidental to this brief note, are pinkish in bud, turning white and appearing throughout April in the Washington area, before or with the first leaves. They are quite without equal in azaleas for fragrance.

JOHN L. CREECH

Division of Plant Exploration and Introduction, Bureau of Plant Industry, Soils and Agricultural Engineering, Plant Industry Station, Beltsville, Maryland.

Pinkshell Azalea

Rhododendron Vaseyi, the so-called Pinkshell Azalea, is not a spectacular azalea, but it has merited and received



J. L. Creech

Rhododendron atlanticum, clump washed free of soil to show the stoloniferous root system.

a great deal of praise, especially from those who have grown it in cold climates.

It comes from the Blue Ridge mountains, in North Carolina and elsewhere, but this does not mean that it will not withstand sub-zero temperatures. Indeed it appears to be one of the very hardiest and, in my own experience, has endured winter temperatures considerably colder than thirty degrees below zero without protection and without the slightest injury. Beside this, it is one of the most quick-growing of azaleas.

This azalea forms a tallish, irregularly branched clump of six, eight or ten feet high, rather upright in form and almost invariably well-covered with flowers in mid-May. These flowers are a bit unique in shape, when compared with other azaleas, having a somewhat two-lipped appearance, and are of a pink and white color, resembling an apple blossom which is pink on the outside and white within. The flowers range up to two inches across in size, and their form gives them a sprightly, almost starlike appearance. They are very good indeed in a naturalistic setting, and, since the flowers bloom before the leaves unfold, their lines are interesting and the cut material makes effective floral arrangements. Moreover, the plants grow so fast and the flowers are so abundant that one does not feel hesitant about cutting them.

Some years ago the well-known botanist, Dr. John K. Small, made a new genus of this species, calling it *Biltia Vaseyi*, after the Biltmore estate near Asheville, N. C., where it grows. It has not proved sufficiently unique, however, to justify such great distinction and, hence, Small's new name has been discontinued. In this, it is closely related to the *Rhodora*, *R. canadense*,

yet is much larger and makes a more popular garden plant.

A pure white-flowered form occurs occasionally in the wild. A good strain of this is being propagated by layerage by an Eastern nurseryman, and the species seems to adapt itself very well to propagation by this method.

CLEMENT G. BOWERS

New York

Tacoma Rhododendron Society

The Tacoma Rhododendron Society was organized in September of 1949. It is a local Society and confines its membership to the immediate environs of Tacoma and Pierce County, Washington. Affiliation has been effected with The American Horticultural Society and with The Royal Horticultural Society of London. All publications of both organizations are circulated among the Tacoma membership.

In May 1950 a very creditable Rhododendron Show was staged by the Society in the spacious lobby of the Bank of California in Tacoma. This was principally a plant show and there were on exhibit many interesting species and top forms of British hybrids. The latest developments in deciduous and evergreen azaleas were also represented. Cut trusses of many species and fine hybrids came to the show from all over the north coast section.

In cooperation with the Washington State Parks an experiment is being conducted to determine the possibility of colonizing rhododendron species in our great Pacific Rain Forests. Large plants of *R. Fortunei* are being used for the initial experiment. Mr. H. L. Larson of the Tacoma Society originated the idea behind the experiment and donated the plants to be used.

A successful field trip was made in August 1950 for the purpose of collecting plants of *R. albiflorum*. Collection was made in the Cascade mountains at

an elevation of 4700 feet. Plants of these will be furnished to several eastern collectors who are interested in assembling representative American species.

Members of the Society donated rhododendrons of fine variety and large size to the College of Puget Sound in Tacoma for a landscaping project. Yearly donations will be made to this campus.

Donation of 57 large rhododendron plants for the Washington State Parks was arranged by the Society through the generous cooperation of H. L. Larson and Director Brian O. Mulligan of the University of Washington Arboretum.

The Tacoma Collection of native American species being assembled by the Society is already a noteworthy achievement. Biltmore Estate of Asheville, North Carolina, has been very helpful and has furnished us plants of many fine species. In exchange the

Tacoma group is sending plants of Pacific slope natives that are missing in the great Biltmore collection. Dr. David G. Leach of Brookville, Pennsylvania, has also sent some important variants to the Tacoma collection. The spring of 1951 will see a near completion of the Tacoma Collection, but the addition of variants will be made as fast as they become available.

A systematic attempt is being made by Society members to import top forms of species and hybrids from England. Some of the great private gardens in England are cooperating by sending grafting scions and a collection of the very fine Edgar Stead originations is being sent from New Zealand.

A collection of rhododendron literature is being donated to the Tacoma Public Library. This collection includes both American and British books.

LEONARD F. FRISBIE

Tacoma, Wash.

A Book or Two

BOTANY FOR GARDENERS. R. P. Faulkner. Chas. Scribner's Sons, New York, 1950. 236 pages, illustrated. \$3.50.

This book is commended to all gardeners, even to those who may feel that they have passed the stages where the reading of so simple a text is their due and portion.

It is lamentably true that very often, possibly too often texts written by persons steeped in the field of botany to whom their own vocabulary has become routine, to whom certain manners of thinking have become subconscious habits, fail when they attempt to write for the layman; it is also true that the gardener who aspires to write outside of his own field, often fails as

well much to the joy of the technical man!

The author here, it seems to this reviewer, has succeeded admirably in writing so that the technical man can have little grievance; and the gardener, especially the beginning gardener, will have the way opened to fuller understanding of his own field and a first insight into the field of the research man.

By all means, get this book.

MAIZE IN THE GREAT HERBALS. John J. Finan, *Chronica Botanica*, 1950. \$3.00.

As wheat, its genetics, crop improvement, and introduction into new areas of cultivation was the cereal of the

nineteenth century, corn is the twentieth century cereal. Hybrid corns, corn genetics (corn of all plants is the most intimately known for its chromosomes and gene actions), the ancient cultural history of corn—all these subjects have been tapped in the recent decades and now we have an inspection of the great herbals for corn. Corn was first illustrated in the herbals only fifty years after the discovery of America, and was probably correctly then believed by the herbalists to have been brought into Europe from Asia. 'Turkey Wheat' or *Frumentum turcicum* is the name used by Fuchs in his *De historia stirpium* (1542) and by thirteen subsequent herbalists up to the Italian Matthioli in 1696. "Turcicum" as a term meant "foreign" because of the introduction by the Turks of many plant and animal products into Western Europe. It was from a similar misconception that the strictly American bird was called Turkey. Where 'Turkey Wheat' as illustrated by Fuchs came from is problematical (the highlands of Indo-China have been suggested as its ancient source). It evidently did not produce prop roots as did the corn of American origins. The second type of maize was reported somewhat later by the herbalists, in the latter half of the sixteenth century, and was believed to be of American origins. Current opinion makes this second corn type an introduction into Europe of the Conquistadores. Finan's scholarly account, fully documented, with 25 reproductions from old wood cuts, is a reprint of a compact 42-page article published in the *Annals of the Missouri Botanical Garden* two years ago. This beautifully designed book should introduce a fascinating subject to a wide circle of readers who have a flair for history.

JOSEPH EWAN

AZALEAS, CAMELLIAS, GARDENIAS. Ben Arthur Davis. Hope Haven Gardens, Meridian, Miss. 114 pages, illustrated.

This is a rewritten and somewhat enlarged edition of Mr. Davis' earlier book. All changes are for the better but this reviewer who has grown azaleas for many a year, would like even more changes! That, however, is purely personal.

The book is intended to be a beginner's book and for the South only, and not an ultimate handbook on the subject. Basically the advice is sound and southerners for whom it is undoubtedly intended will know just how to interpret the advice for their own particular area. The reviewer's area is sandy soil, miserably deficient in humus and with a wonderfully low level of nutrients, but there is not enough advice for him on Gulf Coast Mississippi nor for others who work on poor Coastal Plain soils. Not enough information is given about the dozens of perfectly good 'Indian azaleas' which can be had in the South from the South's own nurseries, and the paragraphs on the so-called Belgians are far too skimpy, both in naming varieties and in discussing their usefulness. But after all, not all gardeners are collectors!

Come on now, Mr. Davis, and write us another beginner's book, but this time for bright beginners, not just run of the mill!

The camellia portions seem less lacking in background data which is really where the azalea part falls down, and certainly sound in some of the varietal collections, etc. As far as this reviewer is concerned and he is a beginner in camellias, there is no law that can be laid down, that would suit most Southerners, about which are good and which are poor camellias. Look over the flowers in all the best

collections, on the bush and not in a show, and choose what you like. Meantime Mr. Davis' lists are good.

The gardenia section could be expanded a little more to great advantage but the meat is there now.

WORLD GEOGRAPHY OF PETROLEUM.

Edited by Wallace E. Pratt and Dorothy Good for The American Geographical Society, Princeton University Press, Princeton, N. J. 1950. 464 pages, illustrated. \$7.50.

There are many contributors to this research volume which of course is no garden book, and the plant life that was concerned with the ages before the petroleum formed and even more ages before man became concerned with it, are not within the usual field of knowledge of the garden-minded.

There would be absolutely no excuse for mentioning it in such a publication as our own, if it were not for the fact that Americans are going to the four corners of the world to work in petroleum fields, some of which lie in areas where a plantsman might conceivably find something that he might send home to garden-minded folk. People who explored for other things in times past have sent home plants to the home lands. Why not again?

LILIES OF THE WORLD. H. Drysdale

Woodcock and William T. Stearn. Charles Scribner's Sons, New York, N. Y., 1950. 431 pages, illustrated. \$8.50.

If one would not be suspected of flippancy, he could write that after this there need be no other books on lilies. Progress reports, yes, comment and ephemera of garden activities, bulletins on the development in the agony section (diseases and insects) and so on, but a general book, never again. It is delectable.

The reviewer has not the slightest intention of becoming a lily grower and knows that there is no moral issue at stake, but if anything could persuade him, it would be this book. Everything is here, current reporting and careful recording of all that has been done, newly set in order and corrected if need be. The illustrations are splendid, comforting too, for not every one represents a lily at its absolute optimum, but well enough chosen so no trumpet lily is shown in that slightly shoddy pose that comes just before the segments fall, and no Martagon is betrayed in that ultimate stage when it is so far rolled back on itself that it has lost all grace.

For good measure there are given also discussions of *Cardocrinum* (once a *Lilium*, but now returned to its former state), *Notholirion* (much the same fate), *Nomocharis* (which in its loveliest forms is better than any lily), *Fritillaria* (lovely in some species but too often given to the most bilious of colors), and *Korolkowia* (apparently little known in general, but damned in the text by the note "a botanically interesting but horticulturally rather dull plant").

Cultural details are singularly free of instructions that are local in character but of course are brought together with Britain in mind. The notes on the character of the native habitats are invaluable or should be to the person who can and will interpret them for himself, and for his own climate and soil.

There are several useful appendices and an excellent index.

All serious workers with lilies will need this work; and all good gardeners who may grow lilies should have it as well.

TREE TRAILS AND HOBBIES. Ruth Cooley Cater. Doubleday & Co.,

Inc., New York, N. Y., 1950. 324 pages, illustrated. \$3.50.

This is probably one of the most important books that has come to the gardening public in many years. There are some mannerisms in the book that become more than a nuisance in time, but one reads on nevertheless; possibly the most annoying are the two words in the title, that become almost a singsong before one comes to the end of the book. Trails, in fact, whether traversed on foot or on horseback are one thing, trails, the visible marks left by something, some one gone before are another; they may be viewed at one and the same time, or they may not. Our author knows them well, all kinds, and uses the words to take her as 'far afield' as library searching, which really belong here but merit other terms. As for 'hobbies,' that is now an evil word, babbled by sociologists who have taken up the salvation of the stupid middle-aged and aged.

The important thing about the book is that it is testimony of what one can learn to see if one learns to see with more than just sight. It is the testimony of enrichment that follows if sight in its fulness is allowed to influence the rest of one's living. That the author happens to have had the privilege, whether it fell in her lap or whether she forged it for herself through a thousand difficulties makes no difference, of having a wider chance at seeing Nature under a wider range of conditions than most of us would have, should serve only as a spur. The photographs are excellent, their legends to the point. And best of all, there is not one thing described as 'dramatic.' That alone is a modern achievement in Nature and Garden writing.

HANDBOOK OF ATTRACTING BIRDS.

Thomas P. McElroy, Jr. Alfred A.

Knopf, Publisher, New York, 1950. 163 pages, illustrated. \$2.75.

One might best treat this book by quoting one sentence from the Preface: "This entire book is based on the proved fact that the simplest way to attract birds is to provide them with what they want." No one would dispute this even if he were not treating of birds! But the book is a good book, written in a straightforward fashion, the style that presents the facts in a rather take them or leave them fashion, which is a great relief from the 'poetically presented' birdbooks. It primarily concerns itself with 'birds found in the areas east of the Mississippi River exclusive of the semitropical species found in Florida and the coastal states.' There is a list of reference works.

This reviewer has always had too many birds visit his gardens and more than successfully sow on the best prepared sites, seeds of many plants native and introduced that always grew better than the plants intended in the design. He looks at birds in the small garden, therefore, with a somewhat jaundiced eye. He has noted also that in such premises, the birds will eat whatever they can eat of fruit and seed as quickly as possible and then sit about and yawp for food, indeed often it is FOOD! In time one wearies of all this.

The plant lists are all sound enough—for the birds—but some of the inclusions are anathema to gardeners, as for example, mulberries, wild black cherry and even hackberry, but the reviewer is not in position to comment on all the notes relative to the eating habits of birds, except to note one particular passage that is simply not true in Maryland, in regard to Flowering Dogwood. "The small clusters of red berries are eaten avidly *after softening by the first frost.*" (Italics mine!)

First frost my eye; the squirrels begin the plunder before the berries turn red, the robins going south, bluejays, thrushes, thrashers and kin clean up the trees long before there is any sign of frost, leaving only an occasional tree that is untouched, then or later. No guess on my part, as to me all dogwood fruits are astringent, but I'm no bird!

DISEASES OF CEREALS AND GRASSES IN NORTH AMERICA. Roderick Sprague. The Ronald Press Company, New York, 1950. 538 pages, illustrated. \$7.00.

As a plant pathologist in the U. S. Department of Agriculture and later in Washington State, the author has been an avid collector and student of diseases of cereals and grasses. The knowledge which he has gained through the years is assembled here as a source of information for others and as an aid in the identification of the parasitic fungi of grasses and the diseases they produce.

The area covered includes North and Central America and Hawaii.

The fungi are listed under four classes—Phycomycetes, Ascomycetes, Basidiomycetes and Fungi Imperfecti. The imperfect fungi take up almost two thirds of the book with 247 species and subspecies. Under each class are keys to the genera and genera and species are listed alphabetically. A technical description of each parasitic fungus is given, including original descriptions, followed by disease symptoms, host range, world distribution and references to literature citations.

The book is sparingly illustrated with drawings by the author, from other sources and by a few photographs. There is a glossary, an index of fungi and of cereal and grass hosts and a list of literature citations covering 79 pages.

Although much fundamental research remains to be done on many genera and species, as the author states, the book should be a valuable source of information to both mycologists and plant pathologists.

CHARLOTTE ELLIOTT

HOW TO LANDSCAPE YOUR GROUNDS.

Loyal R. Johnson. De La Mare Garden Books, New York, N. Y., 1950. 257 pages, illustrated. \$3.50.

One is likely to hesitate to read a book that proposed so bold a theme, but it is a pleasure to report that no hesitation is needed here. The field is well covered and everything is done in the best of taste, with a delightful spread of geographic treatments, and no inclusion of the materials that are bizarre. If the advanced artist may feel that there is little in the text that would kindle *his* spirit, it should be pointed out that the book was not written for him. It is written for the person who comes to his own personal landscape problem without technical training but with native wit and intelligence so that he can quickly lay hold on the essential matters and create a work that will be entirely satisfying.

It is perfectly true that in time he may wish to alter some of his first treatments giving them some touch that will be peculiarly his own, but there is nothing that he can find in it, that will when reproduced by him, later appear as purely fantastic. There is, therefore, not one shadow of reproach in saying that this book is sound.

AN EIGHTEENTH-CENTURY GARLAND.

Louise B. Fisher. Colonial Williamsburg, Williamsburg, Va. 1951. 91 pages, illustrated in color and black and white.

This is a charming record of the Flower and Fruit Arrangements that have been developed by Mrs. Fisher in

the decoration of the restored buildings at Colonial Williamsburg. It is a lovely book, with charming make-up, beautiful typography and excellent color reproductions.

As compared to many books that deal with flower arrangements, this is of signal value in that it stresses a type of flower arrangement that is more native to our culture than many of the rest. Mr. Richardson Wright in his intriguing foreword touches the point with a neat sentence that should make various eye-brows rise: "How welcome these artless arrangements would be among the clutter of self-conscious, macabre combinations of plant materials so often be-medaled today. Need one say more?"

THE LORETTE SYSTEM OF PRUNING.

Louis Lorette. Rodale Press, Emmaus, Penna., 1950. 239 pages, illustrated. \$3.00.

This follows the second edition of this famous work in the original translation by W. R. Dykes, revised by F. J. Chittenden, with a chapter on a modified system of pruning by A. H. Lees, the original photographs and a new drawing by L. R. Brightwell. It is the first edition from the Rodale Press.

This system of training fruit trees is essentially European for countries where there is not the amount of summer sun or heat that we have in this country and will be particularly of value here in those cases where the gardener is interested in the production of dwarf trees trained in the special forms used against walls, or on trellises in formal gardens.

FARMING AND GARDENING IN THE BIBLE. Alastair MacKay. The Rodale Press, Emmaus, Penna., 1951. 280 pages. \$3.00.

This is an interesting treatment of the materials gathered by the writer from many sources organized about the theme mentioned in the title. Whether or not one would care to read it will depend not so much upon the necessities of his own garden practices as upon his curiosity to know how old and how far flung many of the practices that he feels his own have been in other parts of gardening history over the world. For some it will have great sentimental value; for others none. Certainly it is a most readable book even making due allowance for the attempts to correlate some of the less obvious current practices and revivals with antiquity.

The Gardener's Pocketbook

Notes on the Palms

3. *Verschaffeltia splendida* Wendl.

Among the most extraordinary of all palms encountered in collections in the tropics is the so-called Verschaffelt Palm, *Verschaffeltia splendida* Wendl., a native of the Seychelles Islands in the Indian Ocean. This majestic species, which is allied to *Stevensonia* J. Dunc. and *Nephrosperma* Balf. f. of the Tribe Areceae, Subtribe Iguanureae, is occasionally encountered in choice collections of these fine plants, where it always attracts attention because of its almost simple lustrously deep-green foliage and the prominent supporting stilt-roots of the ringed trunk.

In its native haunts, *Verschaffeltia* (the genus has only the single species, restricted in its distribution to the Seychelles) reaches a height of as much as 80 feet, though under cultivation it is generally a rather small-growing palm. The trunk, when young, is virtually covered with long black spines, but as it reaches maturity these are shed, and the trunk is smooth, except for the prominent bulging rings; the aerial stilt-roots, as may be seen in the accompanying photograph, extend well up the trunk, which in some instances may rot away basally, leaving the palm supported only on its adventitious root-system, a condition we also encounter in such genera as *Socratea*, *Triarteia*, *Catoblastus*, etc.

The leaves are few in number, handsomely arching, and reach a length of slightly more than 8 feet, with a width of up to 5 feet; they are deep glossy-green, often almost simple or entire for much of their length (though, as in the illustrated specimen, they sometimes split up into quite regular segments), and have a sheathing spiny

base which forms a small crownshaft above the trunk. The spadix, which attains a length of about 6 feet, is produced on a compressed elongate stalk from among the foliage, and has only a few branches. The flowers are small, not particularly attractive, and complex in formation, as is typical of most palms of this alliance. The abundant green globular fruits measure about 1 inch in diameter, and make the fruiting spadix hang down with their weight.

In the Seychelles the split trunks of *Verschaffeltia splendida* are used as gutters on native buildings, and also as framework for walls of houses. The large, almost entire leaves form an exceptionally fine thatch, of long duration.

The accompanying fine photograph of *Verschaffeltia* was taken by Dr. M. R. Henderson in the Singapore Botanic Gardens. A portion of the large palm collection at that institution is visible in the background.

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A Costa Rican Mallow

"Beautiful and ornamental. . . One of the most interesting and showy trees of Costa Rica," is Dr. Paul Standley's description of a mallow named *Wercklea insignis* which has been established in Florida and southern California. As the 2-inch bristly capsules contain plenty of seeds that germinate readily, the plant doubtless will be widely grown in warm regions because of its "tropical" appearance.

The bright green kidney-shaped, palmately-veined leaves are from 8 to 16



M. R. Henderson

(See page 121)

Versaffeltia splendida



Ruhnke

(See page 121)

Wercklea insignis



Robert L. Taylor

Deutzia Schneideriana



Robert L. Taylor

Deutzia taiwanensis

inches across, spreading away from the branches on thick green to reddish stalks. Because the tree is evergreen and its foliage so heavy, it makes a conspicuous garden plant all year. It compels even more attention from February to April (in Florida) when it produces its huge, solitary, hibiscus-like flowers, 5 inches across, on stalks to 6 inches long. Standley's "Flora of Costa Rica" calls the color "rose-lilac with a yellow base," but by the Royal Horticultural Society chart, the blooms produced in Florida have a throat that is Persian Rose 628, while the petal lips are Magnolia Purple 030/3.

Wrecklea insignis makes a tree of 20 to 35 feet, and its pale thin-barked trunk may be 12 inches in diameter. No records are available on its frost hardiness. Although this is the only species so far established in the United States, Standley reports another species in Costa Rica, *W. lutea*, a similar but smaller tree (10 to 20 feet), with the corolla yellow, and he adds: "Even showier than *W. insignis* because of the bright color of the flowers, which suggest pumpkin blossoms. In form the flowers much resemble those of the hollyhock."

EDWIN A. MENNINGER

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Deutzias

(Continued from page 100)

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Recent Notes

There have been of late several letters in which the member has said that he or she would like to start work on some plant breeding problem. This it seems to us in the office is the most thrilling thing any gardener can do to add to his already full life. The examples in the last *Penstemon* issue, tell of work done in three cases, which has brought into other gardens a great reward. The limits of work within the genus *Penstemon* have not yet been approached. So it is with any number of American plants.

Dr. John Fogg speaking at the luncheon of The Garden Club of America, held this March in New York, took as his topic, American Plants for the Garden. His list was impressive. But he did not speak of plant selection, nor of the value of inbreeding to get finer and finer forms. That is for the gardener to follow and he will be rewarded.

